# OEP Primary Offices of Delivery


**Howard Swancy**
for
Nick Sabatini

**AD2**

# Land & Hold Short Operations

- Allows For Simultaneous Independent Operation of Crossing Runways
- Prior to 1998 LAHSO operations use @ approx. 220 airports and 850 intersecting runway configurations
- FAA/Industry Efforts to Increase Efficiencies Using LAHSO Limited Under New Criteria
- There are a Number Major Airports Still Considered To Be Impacted by implementation FAA Order 7110.118
- FAA's Air Traffic/Flight Standards Organizations Developing Joint Plan to Enhance Crossing Runway Operations

# Strategy

- **Move Past Issues With No Apparent Solution**
- **FOCUS ON IMPACTED LOCATIONS**
  - ORD, BOS, LGA, MIA, HNL
- **Investigate New Ways and Means to Enhance Crossing Runway Operations**
- **Work with Labor and Users to Address Assessment, Development, and Implementation of Procedures at Identified locations.**

# Attention Areas

- **Users Must Collaborate with FAA**
  - **Concurrence by All Stakeholders on safety analysis, approach and assumptions.**
  - **FAA Allows Technical and Operational Input based on fact and**
- **FAA Make Identification of New Procedures to Be Evaluated**
- **Pilot/Controller acceptance of roles and responsibilities in operations when defined.**

# Key Risks

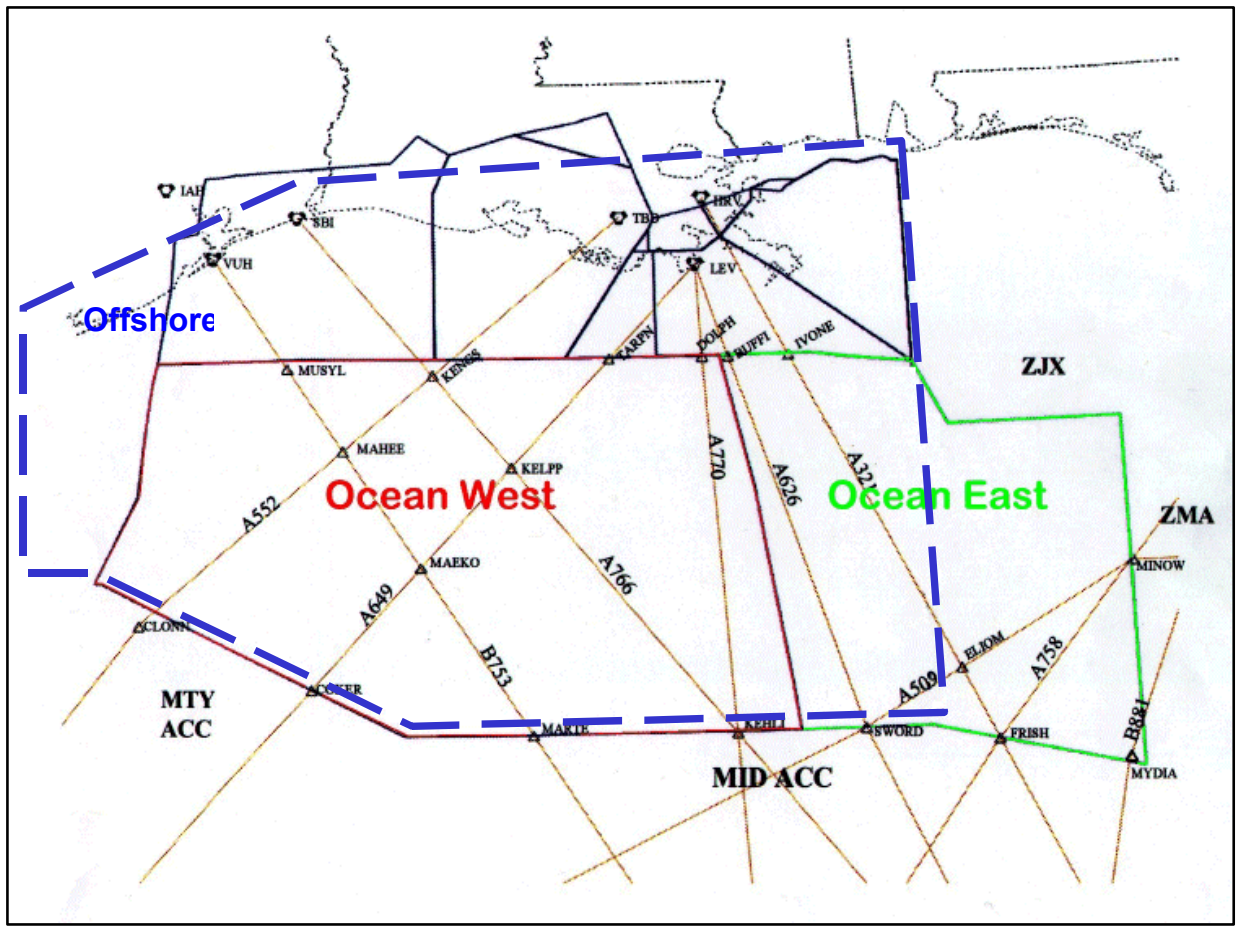
- Confusion Over Existing Separation Standards and Any New Standard
- Loss of Focus (Specific To Airports Identified)
- Compatibility of Any New Standard with Current Pilot/Controller Activities
- Determining Operational Procedures Acceptable to Pilots & Controllers

# OEP Primary Offices of Delivery


**Mike Cirillo** | **AW1/2 ER5/6/8**

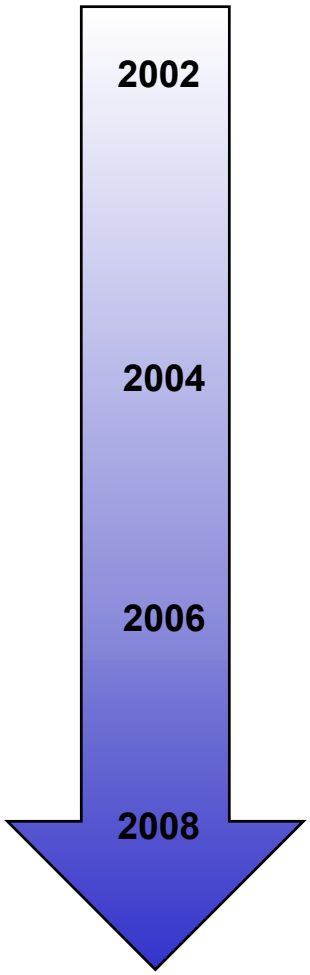
# ER-5: Reduce Offshore Separation

**Traffic growth projections for high altitude traffic and current IMC operations for low altitude require increased capacity to provide more efficient services to NAS users**




***Provide improved communication, navigation, and surveillance services to high altitude and low altitude traffic in the Gulf of Mexico***

# ER-5 Key Milestones



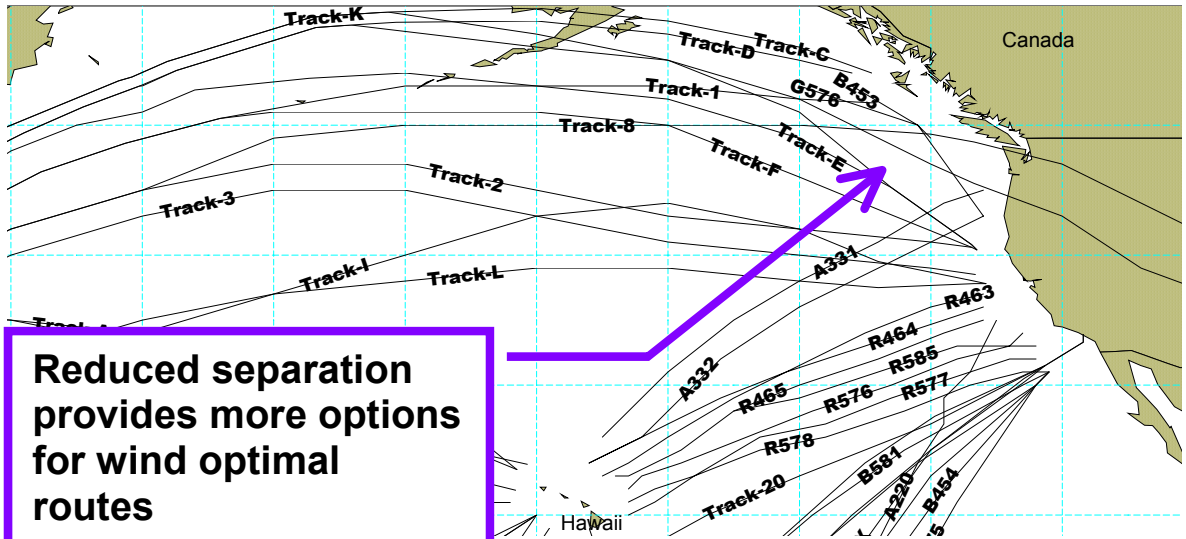

- Complete Investment Analysis for improvements in low altitude airspace in the Gulf of Mexico
- Operational VHF communication leading to domestic non-radar separation from FL180 to FL270 inclusive

# ER-5 Status

- **Accomplishments**
  - RNAV routes to replace J58/86 charted
  - Three VHF production buoys will be deployed beginning in the July/August timeframe
- **Issues/Risks**
  - Effect of severe weather on deployment and maintenance of communications buoys
- **Next Steps**
  - Development and acceptance of new RNAV criteria will enable further enhancements in capacity and efficiencies at FL280 and above
  - Orchestrate investment analysis on high altitude surveillance

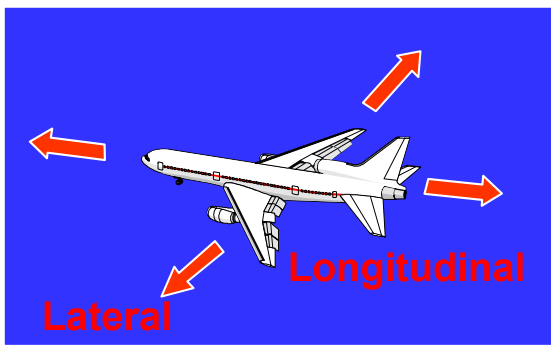
# ER-6: Reduce Oceanic Separation

**Projected growth in oceanic traffic loads require providing safe and efficient services to more aircraft**

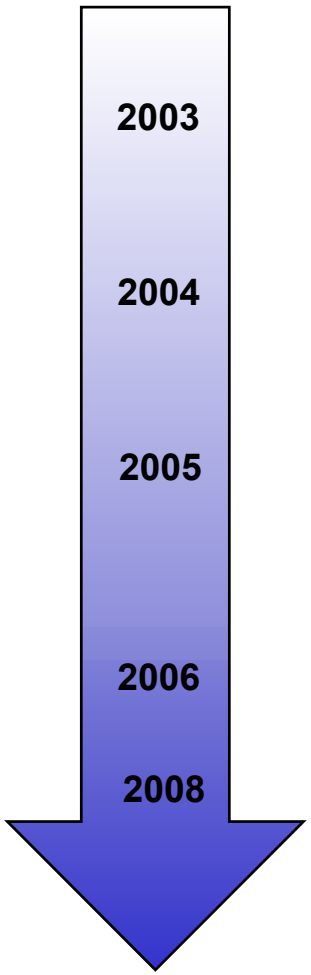



**Reduced separation provides more options for wind optimal routes**

***30 nm lateral and longitudinal (30/30) separation in the ocean***



# ER-6 Key Milestones




- **ICAO Regional Procedures and Guidance**
- **IOC at ZOA (4/03)**
- **ATOP Build II at ZOA (11/04)**
- **Initial Operational Use of 30/30 Separation**
- **Determine En-route Modification**

*Phased Expansion of 30/30 Elsewhere**

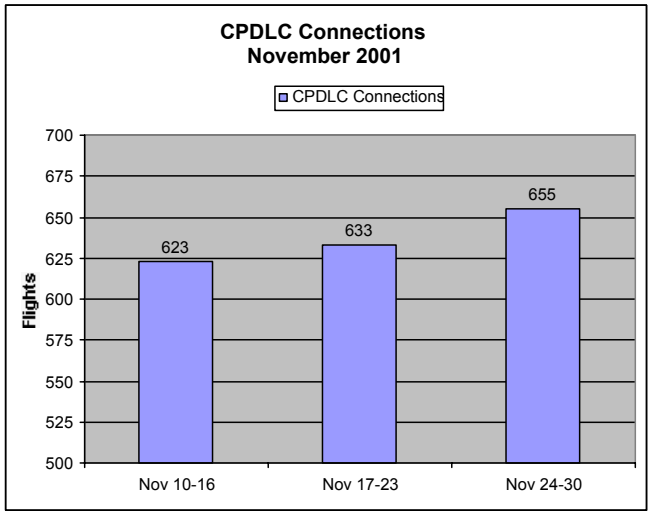
** Planned Milestone*

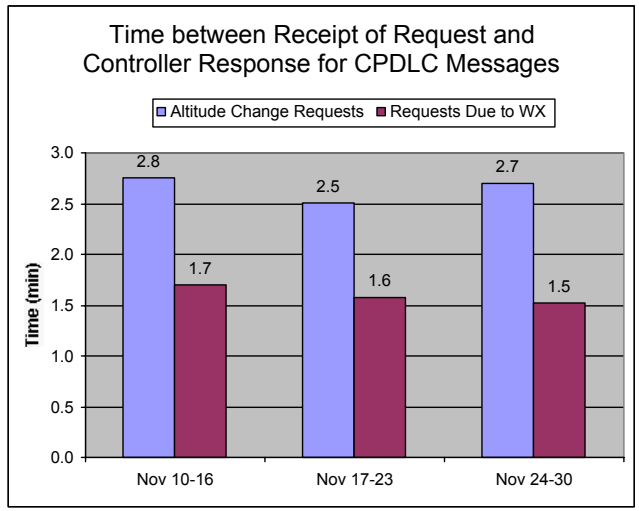
# ER-6 Status

- **Accomplishments**
  - **ATOP contract award**
  - **Final ICAO Doc 4444 and Annex 11 Amendments approved by ICAO 2/02**
    - ✓**Due for publication 11/02**

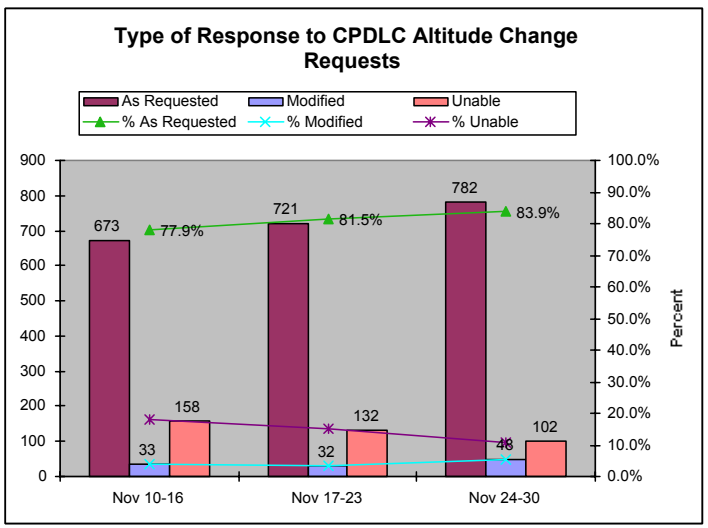
- **Metrics**
  - **Baseline established for ZOA and ZNY**
  - **Ongoing data collection and metrics refinement**

# ER-6 Metrics: Oceanic ATC Service Quality
## ZOA: CPDLC Flights, November 10-30, 2001

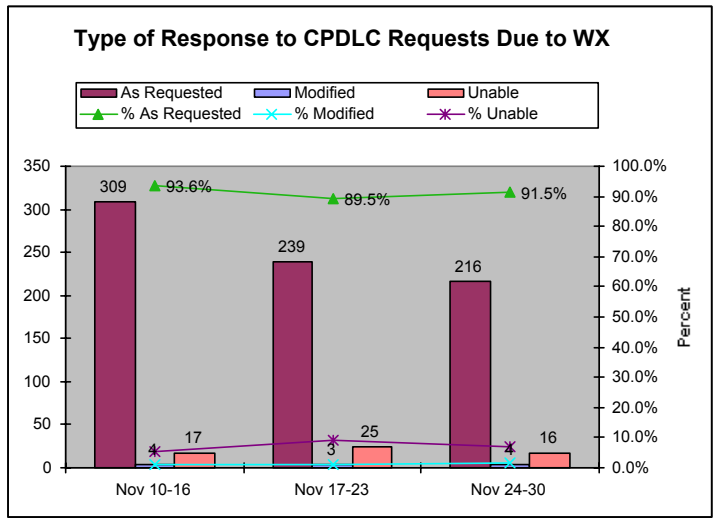



Flexibility



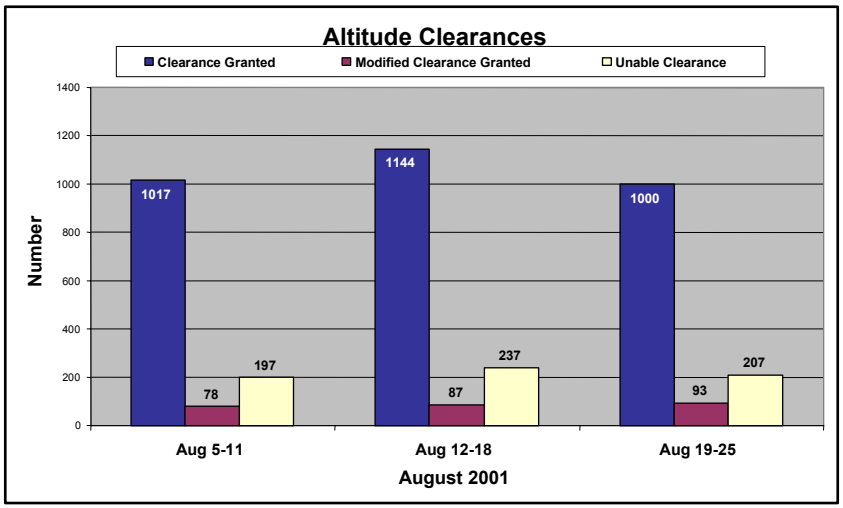

Flexibility

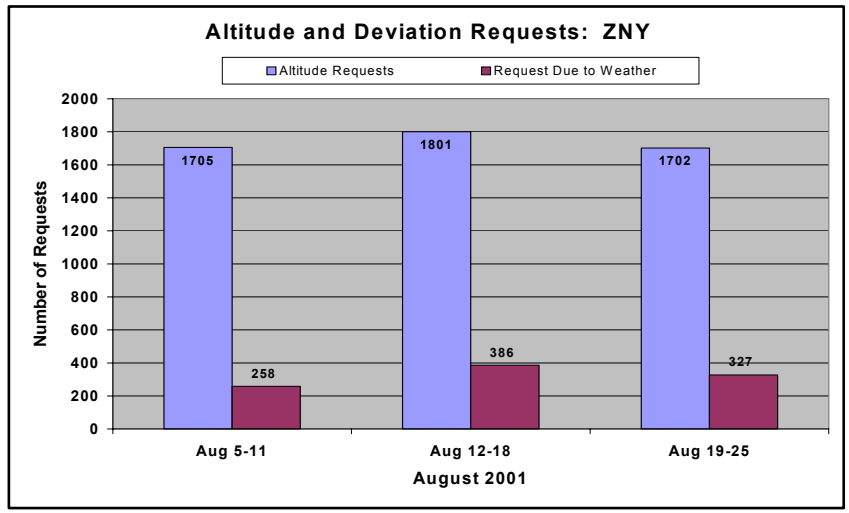



Safety

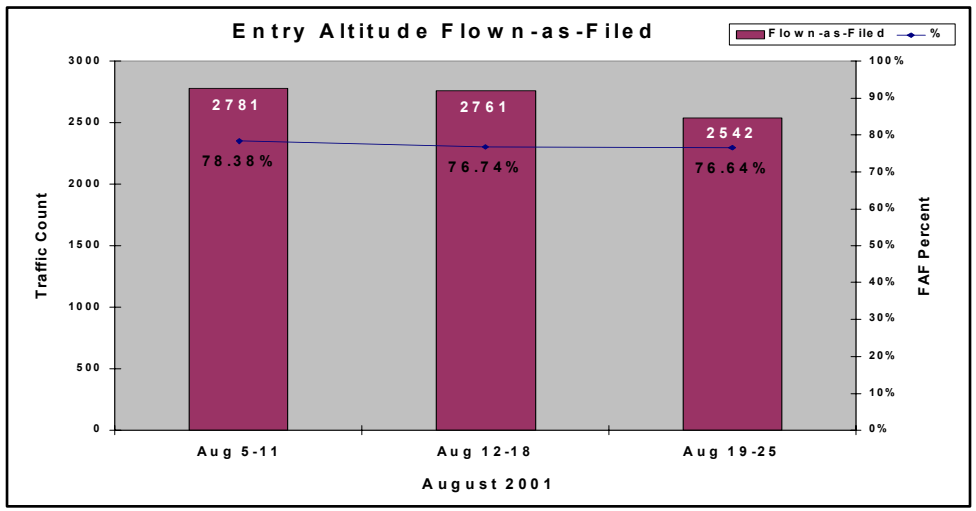
# ER-6 Metrics: Oceanic Performance Dashboard
## ZNY: ATC Metrics

Flexibility



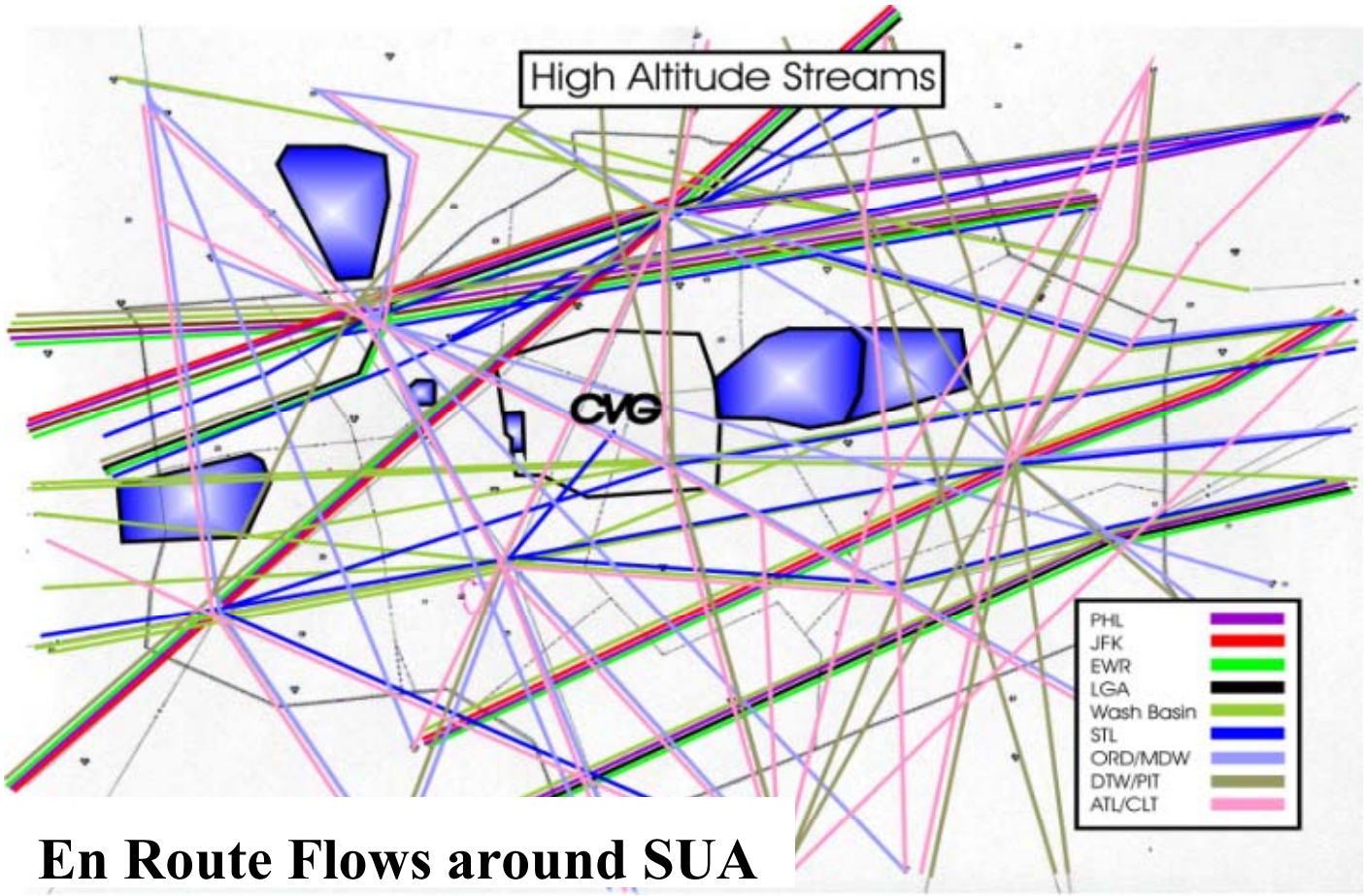




Predictability



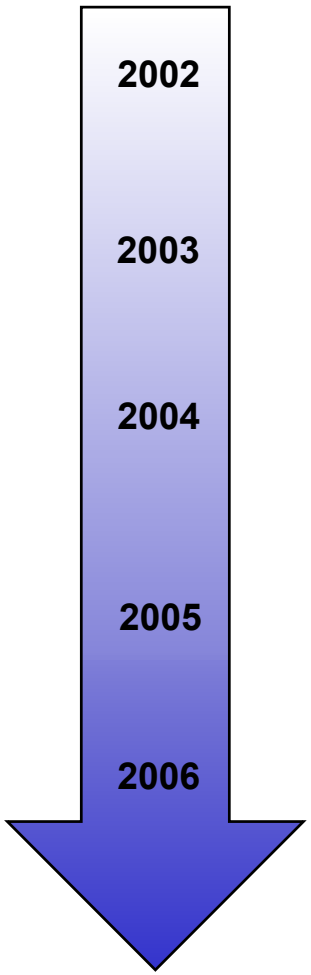
# ER-8: Improve Access to Special Use Airspace

**Improve the efficiencies in which civil aviation gains access special-use airspace**




**En Route Flows around SUA**

# ER-8 Key Milestones




- **Begin deploying SUA/ISE hardware and software (8/02)**
- **Agreement on Procedures/Practices**

*Upgrade to MAMS**

** Planned Milestone*

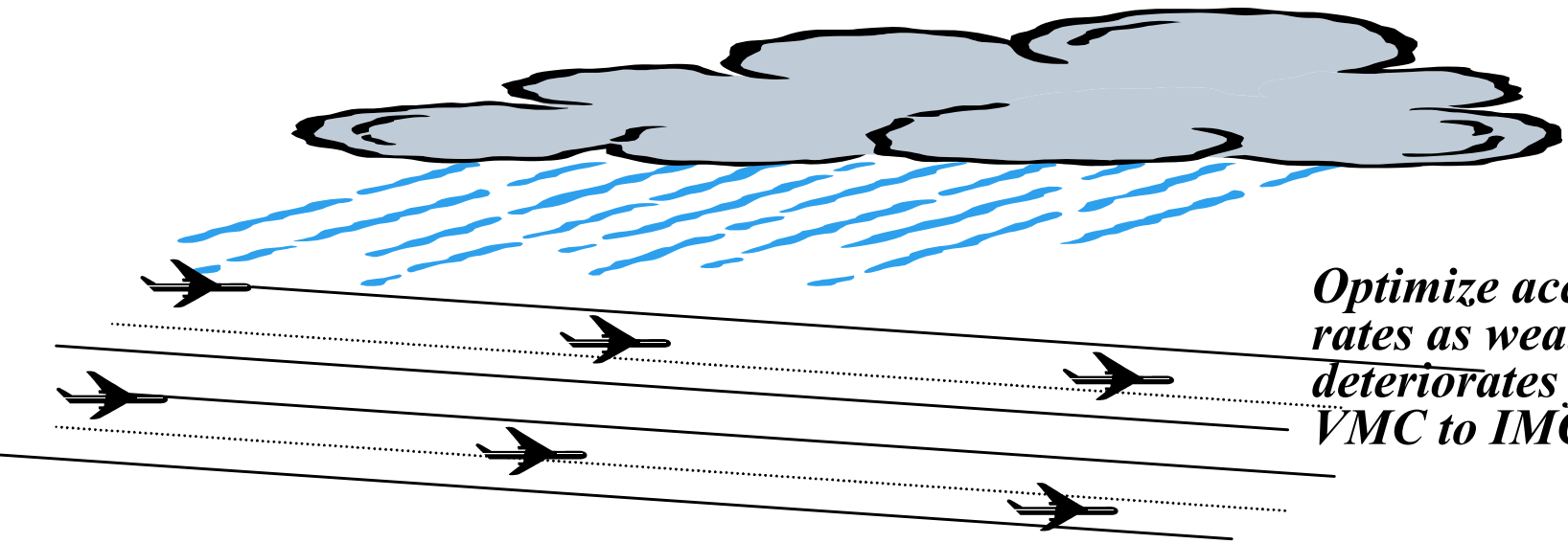
# ER-8 Status

- **Accomplishments**
  - Activities in Palatka Restricted Area-2906 and Brownwood and Westover MOA in the final stages that will result in increased access to users
  - VACAPES SWAP route test completed 4/02

- **Issues/Risks**
  - Defining procedures for sharing SUA availability information
  - Interoperability of SUA information sharing tools and other automation capabilities

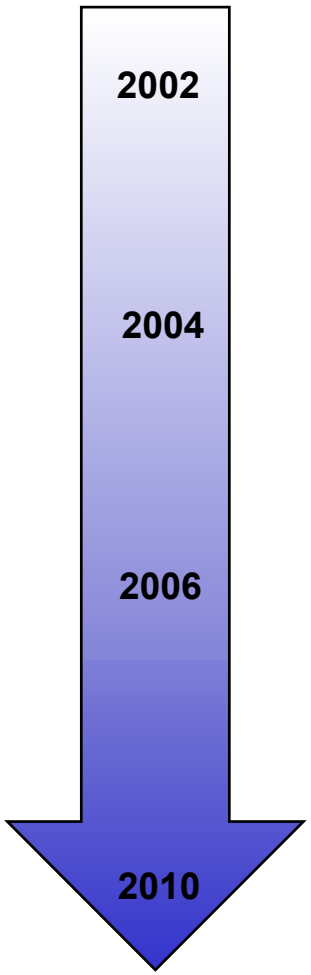
# AW-1: Maintain Runway Use in Reduced Visibility

**Arrival rates are reduced based on adverse weather conditions, which may include poor visibility, unfavorable winds, or heavy precipitation.**



***Optimize acceptance rates as weather deteriorates from VMC to IMC***

# AW-1 Key Milestones




- **PRM Installed at 5 Sites**
- **Certified WAAS/LAAS Avionics**
- **WAAS LNAV/VNAV Operations NAS Wide**
- **CAT I LAAS Operational at Key Airports**
- **Over 500 Airports Have LNAV/VNAV and LPV Procedures**

*More Than 2000 Airports Have LNAV/VNAV and LPV Procedures**

** Planned Milestone*

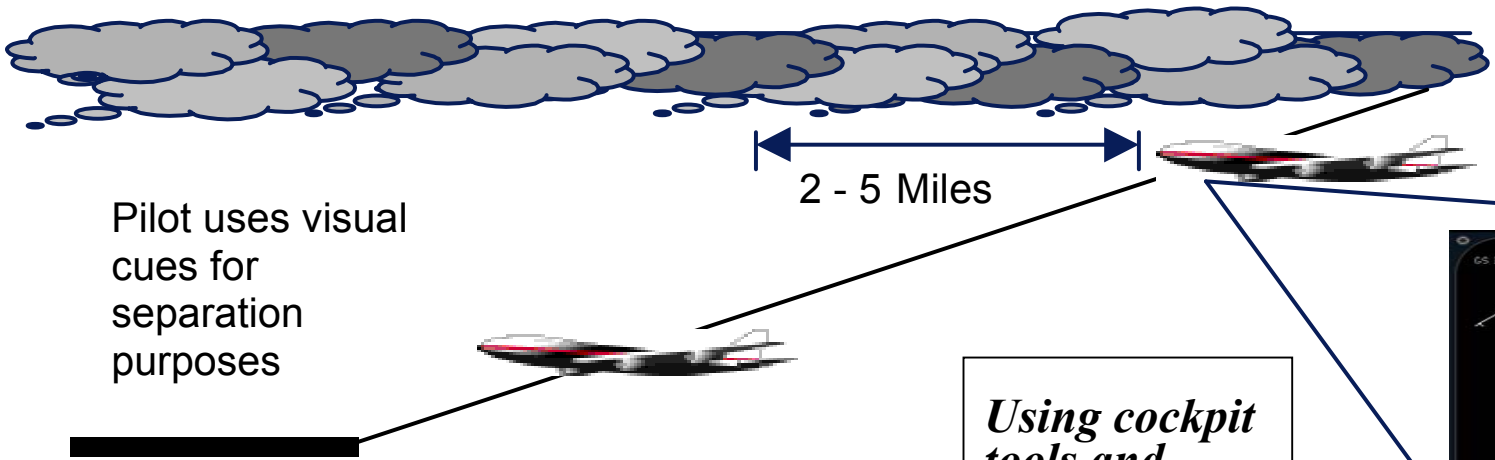
# AW-1 Status

- **Accomplishments**
  - MOU with NATCA on PRM use
  - PRM use at STL and MSP
  - ICAO GNSSP agreed to standardize APV-1as the criteria to support LPV procedures enabled by WAAS
  - PRM in PHL June 3

- **Issues/Risks**
  - Pilot and operator support and acceptance of PRM-SOIA procedures
  - User equipage levels
  - LAAS benefits

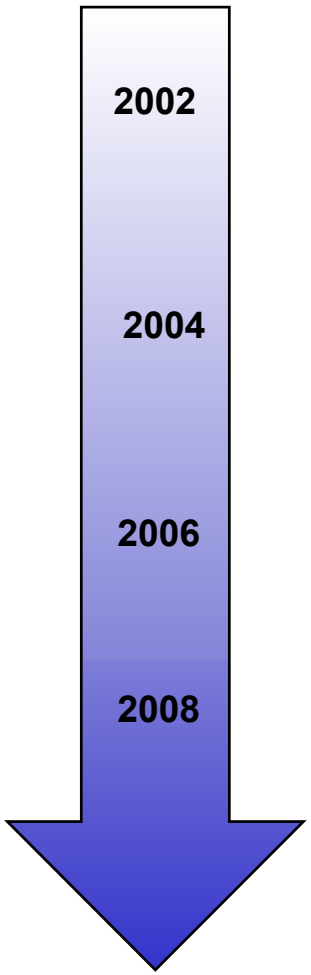
# AW-2: Space Closer to Visual Standards

**Difference between VMC and IMC capacities are significant and safely extending "visual approach" operations into marginal IMC could improve efficiency**




***Using cockpit tools and displays to achieve VMC throughput capacity in all weather conditions.***

# AW-2 Key Milestones



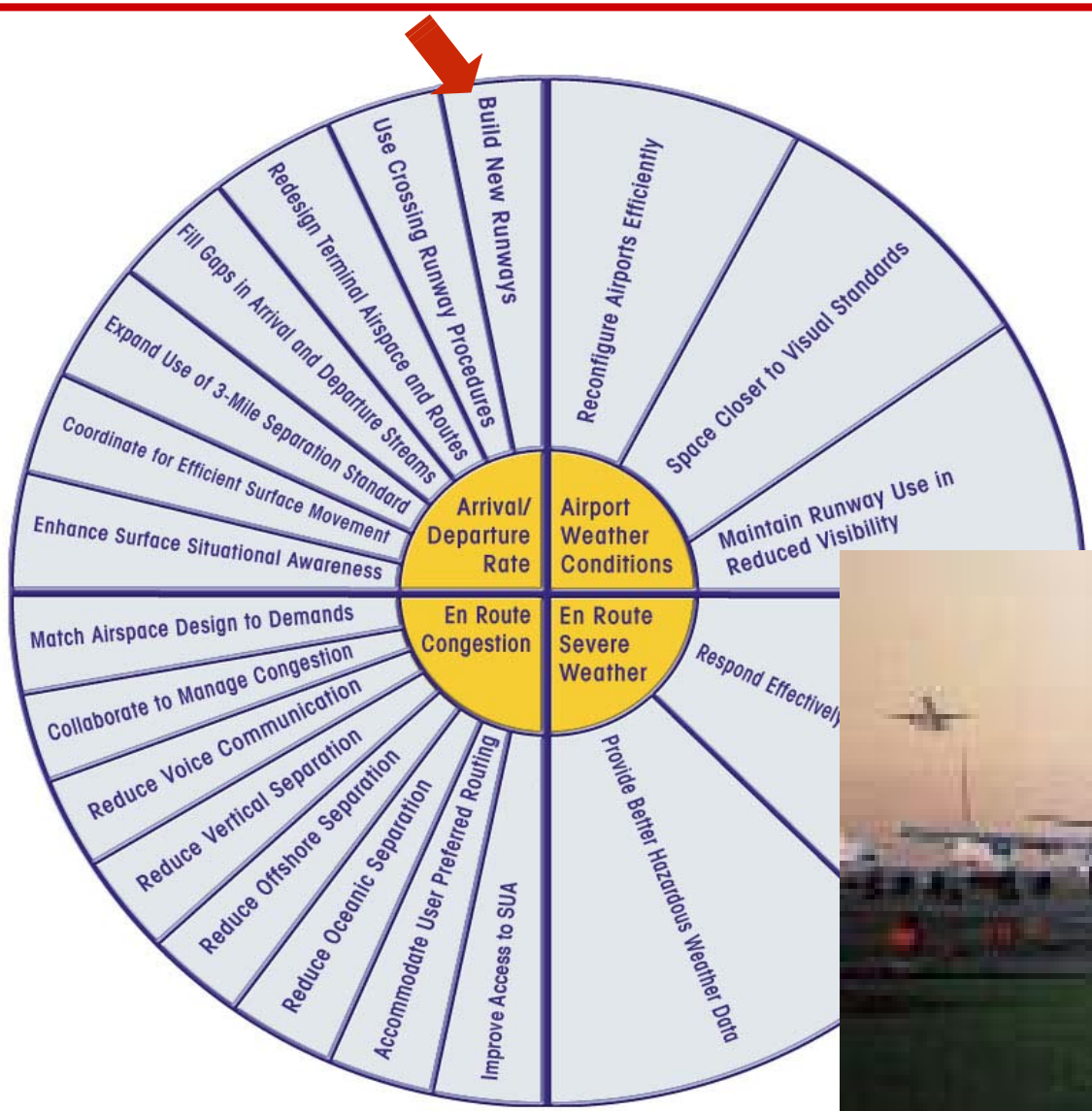

- **Initial feasibility study for CDTI Enabled Flight Rules**
- **Evaluation of initial CDTI Enabled Flight Rules at SDF**

# AW-2 Status

- **Accomplishments**
  - Collected baseline data on enhanced visual approaches at SDF
  - Initial concept for Continued Visual Approach is currently out for review among the participants (e.g, AT, NATCA, ALPA)

- **Issues/Risks**
  - Pilot and controller acceptance
  - Schedule risks for initial evaluation due to application maturity and equipage
  - Feasibility and benefits of procedures in mixed equipage environment
  - Certification-safety assessment of CDTI as visual means

# OEP Primary Offices of Delivery




**Paul Galis** | **AD1**

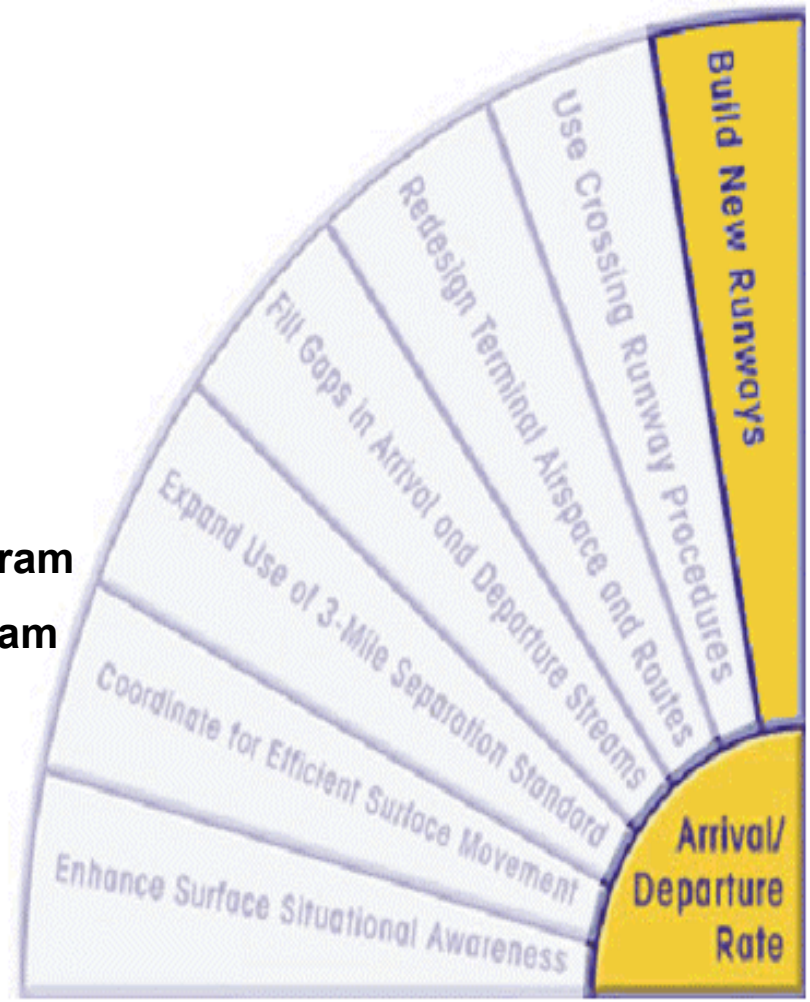
# AD-1 Build New Runways

## Primary Office of Delivery

**Associate Administrator for Airports**

## Support Offices

- Region & Center Operations
- System Capacity
- Air Traffic Planning & Procedures Program
- Air Traffic Airspace Management Program



# Arrival/Departure Rate

- **Improving the arrival & departure rates at the largest airports increases system throughput and increases system efficiency**

- **New runways at major hub airports are incorporated into the OEP as an important element to improve system efficiency and capacity**

# Airport Development

- ***Airport planning and development is primarily the responsibility of local and state authorities***

- **FAA provides technical and financial assistance to help local authorities reach and implement well-informed decisions consistent with a safe and efficient national air transportation system**

# Criteria for Inclusion of Runway in OEP

- **Runway is included in OEP when FAA is reasonably certain of:**
  - ❑ **Location**
  - ❑ **Dimensions**
  - ❑ **Timing**
  - ❑ **Planned use of the runway**

# OEP Contains 12 Runways

| Airport | Opening Date | Environmental | Current Status |
|---|---|---|---|
| Denver | 2003 | Complete | Under Construction |
| Miami | 2003 | Complete | Under Construction |
| Orlando | 2003 | Complete | Under Construction |
| Houston | 2003 | Complete | Under Construction |
| Minneapolis | 2004 | Complete | Under Construction |
| Atlanta | 2005 | Complete | Under Construction |
| Boston | 2005 | Underway | Draft EIS issued |
| Cincinnati | 2005 | Complete | Land Acquisition Underway |
| Seattle | 2006 | Complete | Under Construction |
| St. Louis | 2006 | Complete | Under Construction |
| Washington-Dulles | 2007 | To Begin Shortly | Planning Underway |
| Cleveland | 2004 | Complete | Under Construction |

# Significant Issues Associated with New Runways

- **Environmental Process**
- **Ensuring Fully Operational Runway on Opening Date**
- **Training/Familiarization with New Terminal and Surface Routes and Procedures**

# Environmental Process

## Streamlining the Environmental Process

- Establish EIS Team for Each New EIS for High Priority Projects
- FAA and Consultant Resources
- Improve Federal and State Interagency Coordination

# Ensure Fully Operational Runway on Opening Date

- **Projected runway opening dates frequently change due to unforeseen circumstances at local and national level**
- **Established an integrated team for each OEP runway**
- **Developed a project management tool to ensure that all involved parties are aware of schedule and work together to meet commissioning date**

# Horizontal Integration Team

- Established for each OEP runway
- Consists of representatives from each regional line of business along with a military liaison
- The integration team works with airport sponsor through the Runway Template Action Plan (RTAP)

# Runway Template Action Plan (RTAP)

- **Project management tool consisting of standard tasks that must be considered from initial planning by the airport through runway commissioning with full operational capability**
- **Approximately 260 tasks identified**
- **Focuses on accountability by all parties to meet the runway commissioning date**

# Training/Familiarization with New Terminal and Surface Routes and Procedures

- Pilots may require training and/or familiarization with new terminal and surface routes and procedures

- As needed, the appropriate FAA offices will become involved through the Horizontal Integration Team

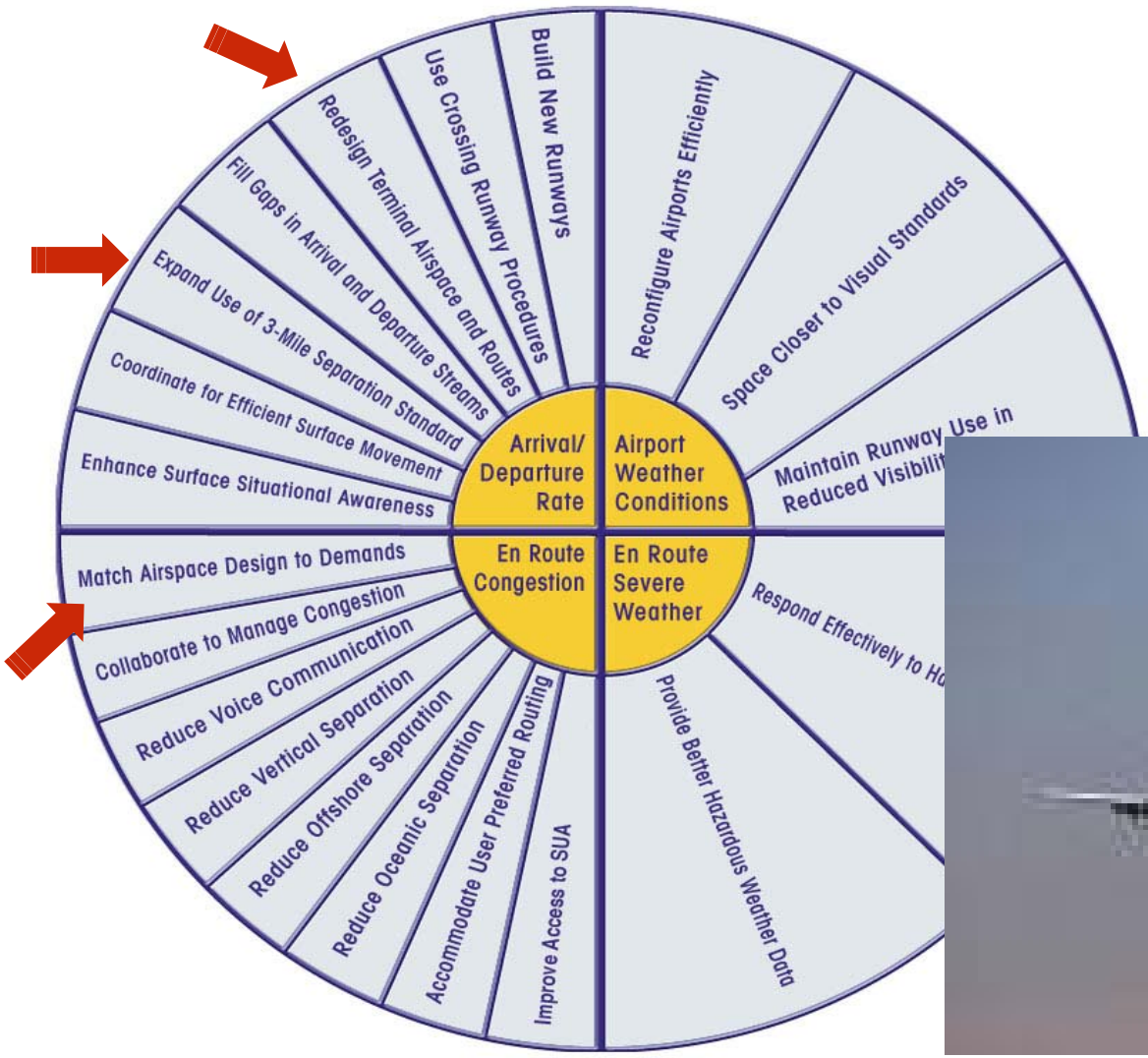
# Status

- All but 7 of the large hubs are planning a new runway, have a new runway under construction, or have opened a new runway in last 10 years
- 2 OEP Runways Opened in Last 2 Years
- 9 Runways Currently Under Construction
- 2 Runways Start Construction in 2003 and 1 Scheduled to begin Construction in 2005
- In addition to the 12 OEP runways, 7 other large hub airports are in various stages of planning a new runway or reconfiguring runways

# Conclusion

- OEP provides framework for capacity and efficiency improvements needed
- New runways are important piece of the framework
- Developed tools to commission new runways on time and with maximum benefit

# OEP Primary Offices of Delivery





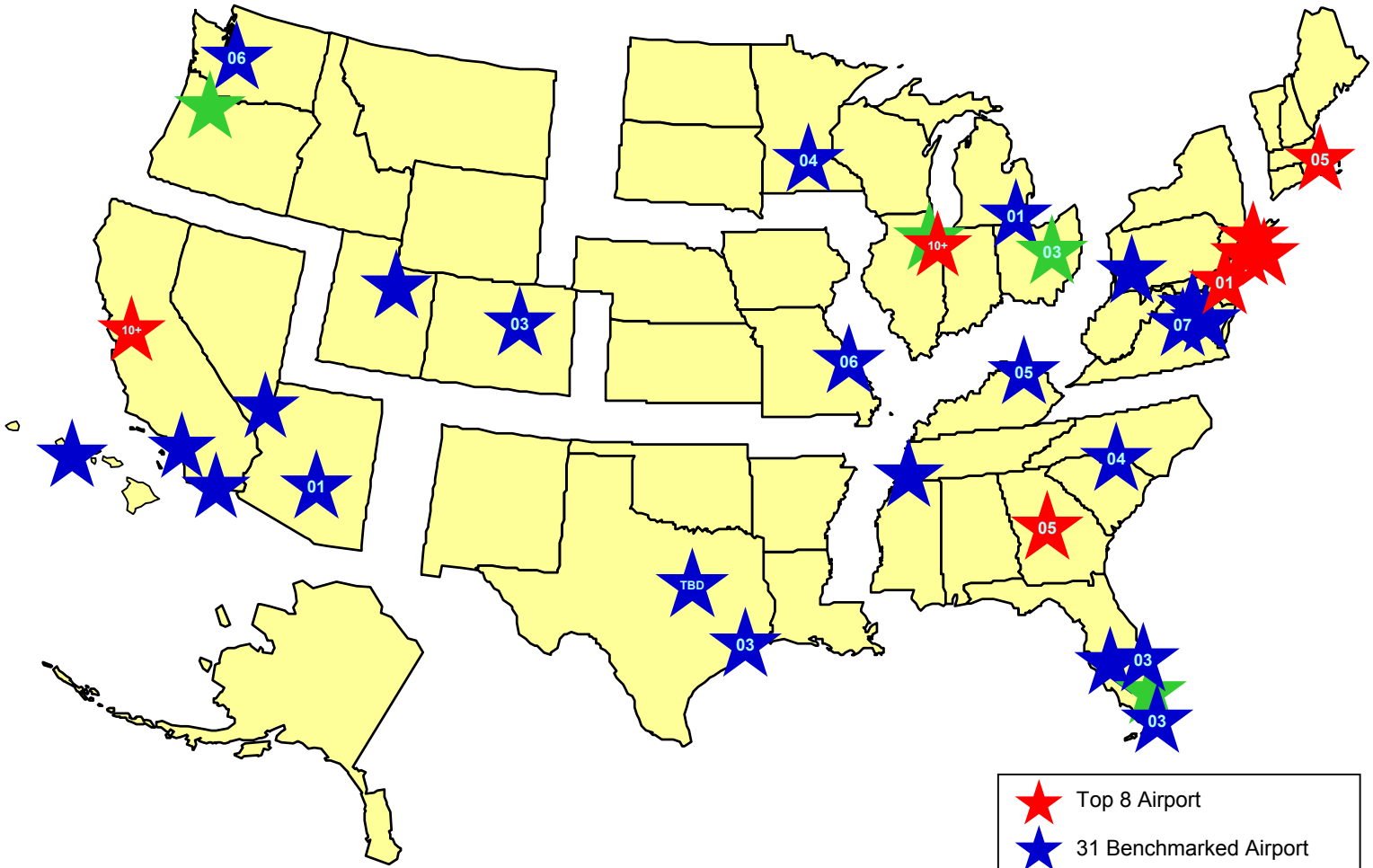
**Sabra Kaulia** | **AD3/5 ER1**


# National Airspace Redesign

- FAA initiative to review, redesign, and restructure the nation's airspace to meet the rapidly changing and increasing operational demands on the NAS
- Encompasses domestic and oceanic airspace
- NAR Performance Goals:
  - Decrease delays and improve efficiency
  - Increase flexibility and predictability for benefit of customers and service providers
  - Balance the access needs of the diverse set of system users
  - Always maintain the highest levels of system safety

NAR
NATIONAL AIRSPACE REDESIGN

# FY2002 NAR Projects, Benchmarked Airports and New Runways




*Runway dates based on January 2002 RTAP Quarterly Report*

# Regional Airspace Projects (FY 2002)

- Salt Lake Four Corner Post
- SEATAC-PDX Terminal Redesign
- Denver South Airspace
- ZLC Redesign
- ZDV Redesign
- ZSE Redesign

- STL Midwest Airspace Plan
- Omaha Redesign
- ZKC East End

- Midwest Expansion Terminal Airspace: DTW, MSP, CVG, CLE, C90
- Great Lakes Corridor En Route Redesign: ZAU, ZID, ZOB, ZMP


- Boston Consolidated TRACON
- NY/NJ/PHL Metropolitan Redesign
- CLT, ATL, CVG, MCO, MIA Terminal Optimizations & Redesigns
- ZTL North-South Flows

- Bay-to-Basin Redesign: ZLA, ZOA, SCT, NCT, SAN, SBA
- SFO Dual CEDES
- NCT Redesign
- Honolulu Redesign
- LAS North Project
- PHX Southside Redesign
- ZOA Oceanic Airspace

- Houston Area Air Traffic System - HAATS

- Western Alaska
- Southeast Alaska
- Interior Alaska
- Anchorage
- ZAN Oceanic Airspace

NAR
NATIONAL AIRSPACE REDESIGN

# AD-3 Redesign Terminal Airspace and Routes

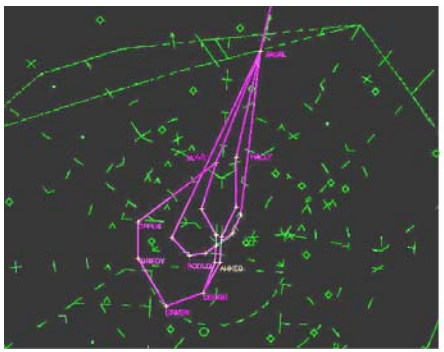
- Current congestion in transition and en route airspace limits the ability to get departing aircraft off the ground.
- Airspace congestion can limit arrivals even when runway capacity is available.

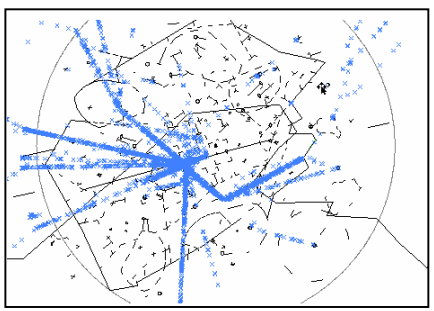
# AD-3 Redesign Terminal Airspace and Routes

## Components

LAADR

TAAP





## Milestones

**Expedited Departure Routes**

- TAAP evaluation — Complete

**Routes Independent from Navigation Aids**

- RNAV Overlays at 7 Airports — Complete
- RNAV at 15 Airports — 2004

**Redesign Terminal Airspace**

- SFO Dual Cedes — 2002
- PCT — 2003
- CVG, LAX, No Cal — 2003/2004
- HAATS, BCT — 2004
- NY/NJ/PHL — 2005/2006
- CLT, STL — 2006

# AD-3 Benefits and Metrics

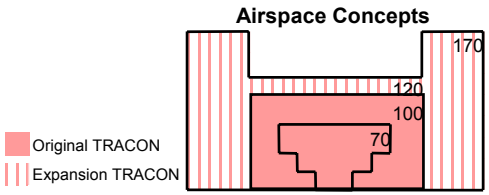
- Increase on time departures
- Increase airport capacity utilization effectiveness
- Improve system predictability

# AD-5 Expand Use of 3-Mile Separation Standard

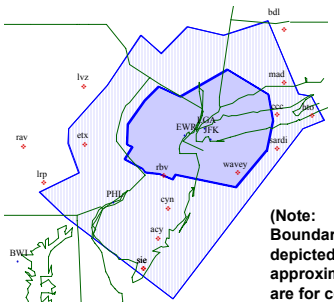
- Current separation standards allow for 3-mile separation when within 40 miles of a single radar sensor.
- By identifying opportunities to maximize the use of the 3-mile standard, airspace efficiency can be improved.

# AD-5 Expand Use of 3-Mile Separation Standards

## Components




**Expansion of Terminal Procedure Applications**




(Note: Boundaries depicted are approximate and are for concept illustration only.)

**Single Facility for En Route and Terminal Operations in New York**

**TRACON Consolidation**

## Milestones

- **SBA** **2002**
- **PCT** **2003**
- **CVG, LAX, No Cal** **2003/2004**
- **HAATS, BCT** **2004**
- **CLT** **2006**

- **NY/NJ/PHL** **2005/2006**

- **PCT** **2003**
- **BCT** **2004**

# AD-5 Benefits and Metrics

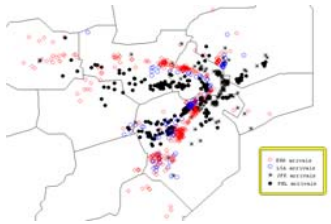
- Increase in effectiveness for top airports
- Increase in on time departure rate
- Decrease in excess taxi times
- Decrease in ground delay programs

# ER-1 Match Airspace Design to Demands

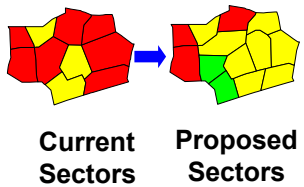
- The en route airspace structure has remained virtually unchanged over the last 20 years.
- Demands on the airspace have increased significantly.
- Lack of equipment, floor space and spectrum limit the addition of new sectors.

# ER-1 Match En Route Airspace Design to Demand

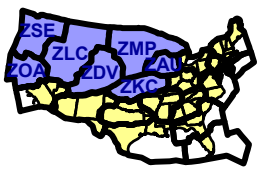
## Components



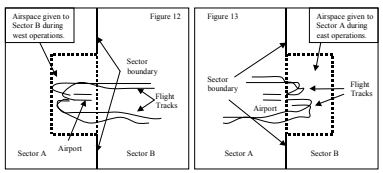
Move Holding for Washington, NY Airports and PHL




En Route Airspace Optimization and Redesign




Implement High Altitude Redesign




Multiple Sector Configurations

## Milestones

- NRP Smoothing — Complete
- PCT — 2003
- NY/NJ/PHL — 2005/2006

- Choke Points Sectors
  (initial) — Complete
  (final) — 2002
- Initial Reroutes — 2002
- ZKC East End — 2003
- Bay to Basin — 2003/2004
- Great Lakes Corridor — 2006

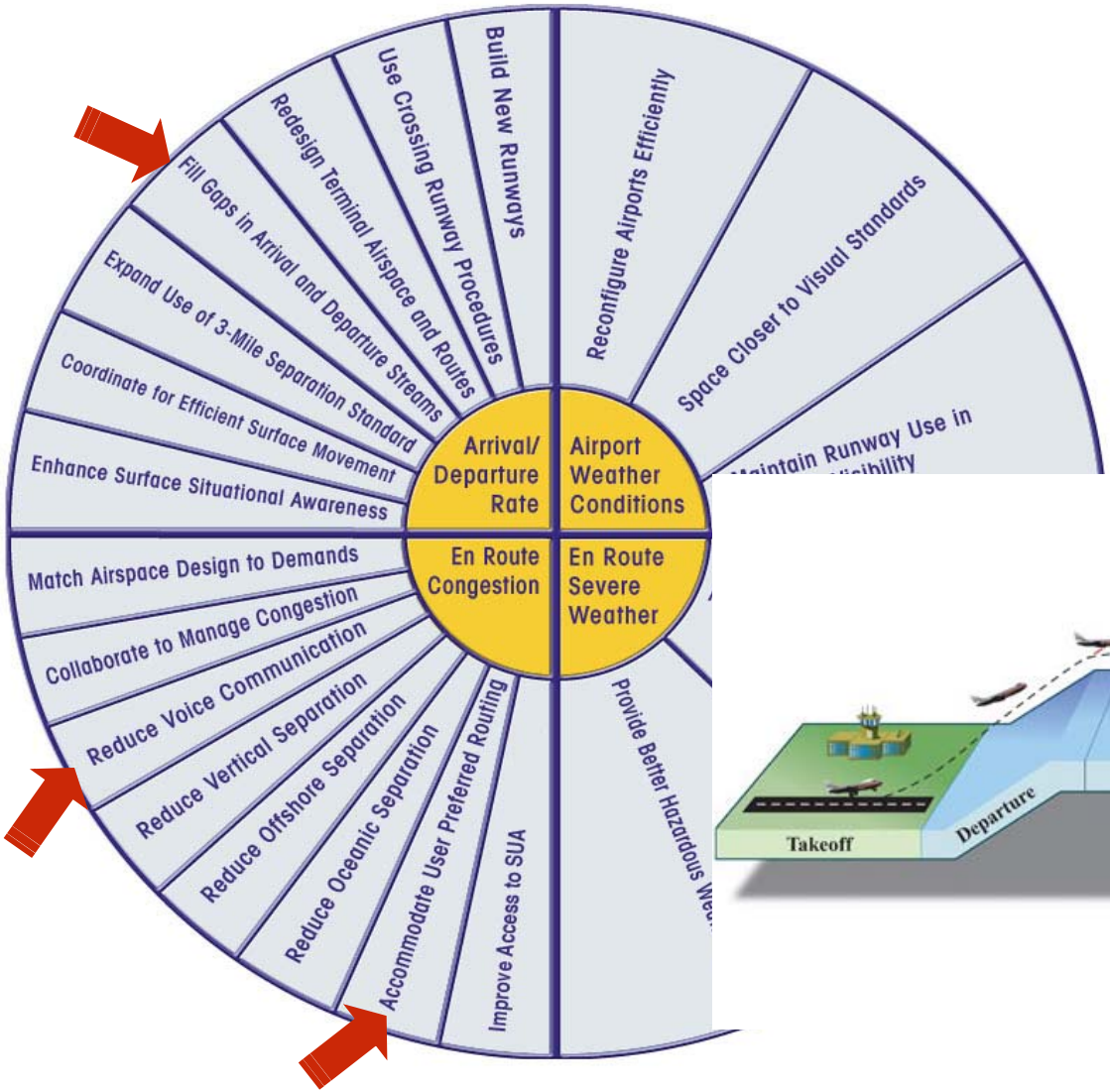
- Initial Implementation — 2003

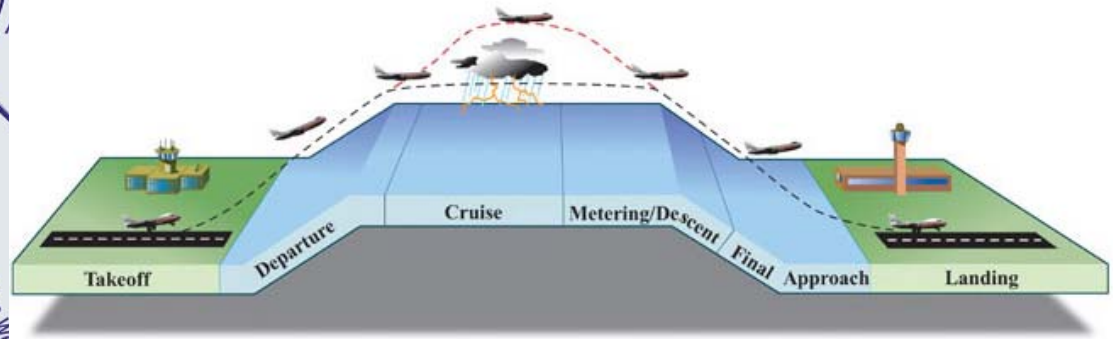
- LDR Casebook — Complete

# ER-1 Benefits and Metrics

- Ground delays and ground stops should be reduced.
- Performance improvements for arrivals and departures will be based on variance of throughput for flows to selected city pairs.
- Restrictions to manage sector complexity and congestion should be reduced.

# OEP Primary Offices of Delivery





**John Thornton** | **AD4 ER3/7**